

IN THE CLAIMS

PLEASE AMEND THE CLAIMS AS FOLLOWS:

1-139. (CANCELLED)

140. (Currently Amended) A method of detecting blood flow abnormality or variation in a vessel or tissue comprising:

administering a contrast enhancing amount of a paramagnetic metal containing magnetic resonance (MR) contrast agent into a vessel of a body;

imaging at least a portion of the body through which the MR contrast agent passes, with a MR imaging technique, thereby collecting temporally spaced sets of 3-D and 2-D data, each data set collected successively through an acquisition time;

forming a time sequence of image data including early image data and later image data;

comparing 3-D and 2-D data from the temporally spaced sets ~~[[set]]~~ of data by evaluating 2-D and 3-D temporally acquired images by comparing ones of said early image data within said acquisition time with ones of said later image data within said acquisition time and their intensity to assess blood flow or angiographic abnormality or variation.

141. (Previously Presented) A method of detecting blood flow abnormality or variation, in a human body, said method comprising the steps of:

administering into vasculature of said human body a contrast enhancing amount of a paramagnetic metal containing magnetic resonance contrast agent;

subjecting said human body to a magnetic resonance image procedure capable of generating from magnetic resonance signals from said human body successive images of temporally spaced images taken over an acquisition time period of at least part of said human body into which said contrast agent passes, said procedure being a magnetic resonance imaging procedure;

detecting temporal variations in said signals or images; and

from said temporal variations identifying regions of abnormal or modified blood flow in said human body and providing a quantitative indication of blood flow abnormality or variation.

142. (Previously Presented) A method of detecting and quantitatively evaluating the severity of blood flow abnormality in a human body, said method comprising the steps of:

administering into vasculature of said human body a contrast enhancing amount of a paramagnetic metal containing magnetic resonance contrast agent;

subjecting said human body to a magnetic resonance image procedure capable of generating from magnetic resonance signals from said human body successive images of temporally spaced images taken over an acquisition time period of at least part of said human body into which said contrast agent passes, said procedure being a magnetic resonance imaging procedure, to detect temporal variations in said magnetic resonance signals or images;

detecting blood flow abnormality or flow variation in obstructed blood vessels in said body; and

identifying from said temporal variations in said images the blood flow abnormality.

143. (CURRENTLY AMENDED) A method of detecting blood flow abnormality or variation in a blood vessel comprising:

administering a contrast enhancing amount of a paramagnetic metal containing magnetic resonance contrast agent into a blood vessel of a body;

imaging at least a portion of the body through which the MR contrast agent passes, with a magnetic resonance imaging technique, thereby collecting temporally spaced sets of contour data and planar image data, each data set collected successively through an acquisition time;

forming a time sequence of image data including early image data within said acquisition time and later image data from within said acquisition time;

comparing contour data and planar image data ~~[[a]]~~ from the temporally spaced sets ~~[[set]]~~ of data by evaluating contour data and planar image data temporally acquired images by comparing ones of said early image data with ones of said later image data and their intensity to assess blood flow abnormality or variation.

144. (Previously Presented) The method of claim 143 wherein said comparing step is carried out by a physician visually examining at least two time sequenced images.

145. (Previously Presented) The method of claim 143 wherein said comparing step is carried out by software quantitatively manipulating contour data and planar image data from at least two temporally spaced sets of data.